

WRITTEN OFFICE ACTION OF THE
INTERNATIONAL SEARCH AGENCY

International File Number
PCT/DE2004/000694

Field No. II Priority

1. x The following document has not yet been filed:

x Copy of the earlier application whose priority had
been claimed (Rule 43bis.1 and 66.7(a)).

Handwritten note: See Priority Document (illegible) See debit
DPM1 of April 21, 2004 (illegible) See
response of (illegible)

Field No. V Substantiated Determination according to Rule
43bis.1(a)(1) Concerning Novelty, Inventive Activity and
Industrial Applicability; Documents and Statements for
Supporting This Determination

1. Determination

Novelty	Yes: Claims 1-20
Inventive Activity	Yes: Claims 1-20
Industrial Applicability	Yes: Claims 1-20

2. Documents and Statements

See attached page

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INTERNATIONAL SEARCH AGENCY
(ATTACHED PAGE)

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Concerning Point V.

1 In the present office action, reference is made to the following documents:

D1: DE 40 13 702 A (WEGMANN & CO) October 31, 1991 (1991-10-31)

2 Document D1 is considered to be the closest state of the art. It discloses (references in parentheses refer to this document):

Method of detecting wind velocities by means of a Doppler-lidar system (10), by which a laser beam of a defined wavelength is emitted toward a space area (see D1, Page 3, Line 24 - Page 4, Line 16; Figures) and the light backscattered from the space area is received, for the determination of a Doppler shift, an interferogram (34) being generated by means of an interferometer (16) and the intensity distribution of the interferogram being measured by means of a photodetector (17),

from which the object of the independent Claim 1 differs in that:

the intensity distribution is compared with a family of

reference patterns which had previously been determined for defined atmospheric parameters, which comprise different densities and/or temperatures, from the comparison with the family of different reference patterns, the Doppler shift being determined as a measurement for the wind velocity.

2.1 The object of Claim 1 is therefore new (Article 33(2) PCT). The object to be achieved by means of the present invention can therefore be considered to be the improvement of the extent of the measuring reliability.

2.2 For the following reasons, the solution for achieving this object suggested in Claim 1 of the present application is based on an inventive activity (Article 33(3) PCT):

The D1 also relates to this object: However, the solution disclosed in D1 differs from the solution of the present invention (see above). The above-mentioned characteristics, which can be considered as achieving the object, are neither mentioned in the additional cited documents, nor are they disclosed at any other point.

2.3 Claims 2-12 are dependent on Claim 1 and thereby also meet the requirements of the PCT with respect to novelty and inventive activity.

3 Document D1 is considered to be the closest state of the art. It discloses (see D1, Page 3, Line 24 - Page 4, Line 16; Figures):

Doppler-lidar system for the detection of wind velocities, particularly on board airplanes, having a transmitting device for emitting a laser beam, a receiving device for receiving the laser beam backscattered in the atmosphere, an interferometer for generating an interferogram from the backscattered laser beam, a photodetector for determining the intensity distribution of the interferogram, the interferogram (34) being imaged directly on the photodetector, and having an analyzing unit for determining the Doppler shift as a measurement for the wind velocity of the atmosphere,

from which the object of the independent Claim 13 differs in that:

the analyzing unit comprises a memory with a family of reference patterns which apply to previously defined atmospheric parameters which comprise different densities and/or temperatures of the atmosphere, and a comparison unit is provided which determines the wind velocity from a comparison of the imaged interferogram with the family of reference patterns.

3.1 The object of Claim 13 is therefore new (Article 33(2) PCT). The object to be achieved by means of the present

invention can therefore be considered to be the improvement of the extent of the measuring reliability.

3.2 For the following reasons, the solution for achieving this object suggested in Claim 13 of the present application is based on an inventive activity (Article 33(3) PCT):

The D1 also relates to this object: However, the solution disclosed in D1 differs from the solution of the present invention (see above). The above-mentioned characteristics, which can be considered as achieving the object, are neither mentioned in the additional cited documents, nor are they disclosed at any other point.

3.3 Claims 14-20 are dependent on Claim 13 and thereby also meet the requirements of the PCT with respect to novelty and inventive activity.